

CLAIM AMENDMENTS

1. (Currently Amended) A process of manufacturing cement from a first raw mix including a mixture of (i) CaCO_3 , (ii) at least one of Al_2O_3 and $\text{Al}(\text{OH})_3$, (iii) CaSO_4 , and (iv) at least one of SiO_2 and a product containing silica or silicates, ~~such as clay, in the an~~ anhydrous or hydrated form, the process including treating the mixture before a clinkering stage by movement in the center of a kiln, in a sheet with approximately constant thickness, at approximately constant speed, along a treatment path having a positive temperature gradient, and for a treatment time, during which the mixture remains below its melting temperature, to produce a sulfoaluminate cement, clinkering to produce a clinkered mixture, and cooling the clinkered mixture upon exit from the treatment path.

2. (Previously Presented) The process of manufacturing cement according to Claim 1, wherein the mixture contains $\text{Al}_2(\text{SO}_4)_3$ in anhydrous or hydrated form.

3. (Previously Presented) The process of manufacturing cement according to Claim 2, wherein the mixture includes up to 10 wt.% of $\text{Al}_2(\text{SO}_4)_3$.

4. (Previously Presented) The process of manufacturing cement according to Claim 1, wherein the mixture contains at least one mineral phase including at least one iron oxidation product for obtaining a second raw mix, said cement being a ferroaluminate cement.

5. (Previously Presented) The process of manufacturing cement according to Claim 1, wherein the mixture contains an oxide of a transition metal chosen from the group consisting of Sc, Ti, V, Cr, Mn, Co, Ni, Cu, Zn, Y, Zr, Nb, Mo, Cd, La, Hf, Ta, and W.

6. (Previously Presented) The process of manufacturing cement according to Claim 5, wherein the mixture contains 5-10 wt% of the transition metal oxide.

7. (Previously Presented) The process of manufacturing cement according to Claim 1, including preparing the mixture by (i) mixing of each of the constituents of the mixture with water to obtain a slurry, (ii) filtering said slurry to obtain a pasty residue, (iii) transforming said pasty residue for introduction into the center of the kiln.

8. (Previously Presented) The process of manufacturing cement according to Claim 7, including transforming the pasty residue by mixing, and extruding plates or strips with approximately constant thickness.

9. (Previously Presented) The process of manufacturing cement according to Claim 4, including depositing the second raw mix on an underlayer of the first raw mix before clinkering.

10. (Previously Presented) The process of manufacturing cement according to Claim 1, including moving the mixture in the center of the kiln on rollers.

11. (Previously Presented) The process of manufacturing cement according to Claim 10, wherein the rollers are silicon carbide.

12. (Previously Presented) The process of manufacturing cement according to Claim 11, wherein the rollers are coated with at least one of silicon and MgO-ZrO_2 .

13. (Previously Presented) The process of manufacturing cement according to Claim 10, wherein the rollers are coated with a refractory stainless steel with a melting point higher than 1400°C .

14. (Previously Presented) The process of manufacturing cement according to Claim 13, wherein the coating of refractory stainless steel consists of sleeves mounted for freely rotating around a roller.

Claim 15 (Cancelled)

16. (Previously Presented) The process of manufacturing cement according to Claim 1, including clinkering in the presence of oxygen.

17. (Previously Presented) The process of manufacturing cement according to Claim 1, wherein the mixture is subjected, along the treatment path, successively to drying and/or dehydration, decarbonation, and clinkering.

In re Appln. of BEAUVENT et al.
Application No. 09/933,130

18. (Previously Presented) The process of manufacturing cement according to Claim 1, including milling the clinkered mixture and mixing the clinkered mixture, after milling, with at least one material selected from the group consisting of limestone, gypsum, anhydrite, heavy metals, and oxidation compounds of heavy metals.

Claims 19-26 (Cancelled)